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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,307	04/04/2005	Janardhana Bhat	SG 020026	9932

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EXAMINER	
LEE, SIU M	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,307	BHAT ET AL.	
	Examiner	Art Unit	
	Siu M. Lee	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8 and 13-17* is/are rejected.

7)☒ Claim(s) *6-7, 9-12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 April 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because figure 1, 3, and 4 does not have sufficiently descriptive labels. Blank boxes in drawings should be labeled descriptively unless it is a well-known component. For example, the blank box, "130" in figure 1 should be labeled something similar to "filter". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the

several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The specification is objected to because the disclosure is not divided into section as described in MPEP.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 4, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Albicker (US 7,274,918 B1).

(1) Regarding claim 1:

Albicker discloses a method comprising the steps of measuring at least one signal quality parameter(the reception quality) ; and deciding to switch the amplifier either to its ON state or to its OFF state on the basis of the measured parameter (if the quality of the set AM radio program is not sufficient, the amplifier is muted, if the quality

of the set AM radio program is sufficient, the muting is disabled and the amplified AM radio signal is presented to the loudspeaker, column 4, lines 10-15), wherein the step of deciding to switch the amplifier to its ON state is exclusively taken at least one time interval when the receiver is switched to a channel (the control unit controls the AM radio receiver to identify an AM radio program with adequate reception quality, the control unit commands the AM tuner to tune through the AM frequency band in discrete steps, column 4, lines 19-23).

(2) Regarding claim 3:

Albicker discloses wherein eh step of measuring at least one signal quality parameter comprises the step of measuring intermodulation products (the examiner interpret intermodulation product as the interference from a neighbor channel) (the tuner measures the signal strength at a certain channel frequency, and an adjacent frequencies to the certain channel frequency, if there is signal energy indicative of noise at the adjacent frequencies, a noise value is subtracted from the measured signal strength of the first desired frequency to provide a corrected measured signal strength value, which is compared against a threshold to determine if valid audio data is present at the first desired frequency, column 1, lines 40-50).

(3) Regarding claim 4:

Albicker discloses wherein the step of measuring at least one signal quality parameter comprises the step of measuring a noise-related signal (the tuner measures the signal strength at a certain channel frequency, and an adjacent frequencies to the certain channel frequency, if there is signal energy indicative of noise at the adjacent

frequencies, a noise value is subtracted from the measured signal strength of the first desired frequency to provide a corrected measured signal strength value, column 1, lines 40-50).

(4) Regarding claim 15:

Albicker discloses a signal quality measuring system for use in a receiver capable of receiving at least one input signal, designed to generate a signal indicative (noise value from adjacent channel) of intermodulation product (the examiner interpret intermodulation product as the noise and interference from a neighbor channel) (the tuner measures the signal strength at a certain channel frequency, and an adjacent frequencies to the certain channel frequency, if there is signal energy indicative of noise at the adjacent frequencies, a noise value is subtracted from the measured signal strength of the first desired frequency to provide a corrected measured signal strength value, which is compared against a threshold to determine if valid audio data is present at the first desired frequency, column 1, lines 40-50).

6. Claims 1, 3, 4, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kenney et al. (US 6,009,129).

(1) Regarding claim 1:

Kenney et al. discloses a method comprising the steps of measuring at least one signal quality parameter (intermodulation distortion (IMD), column 6, lines 46-50); and deciding to switch the amplifier either to ON state or to its OFF state on the basis of the measured parameter (the examiner interpret the OFF state as the signal bypass the

amplifier so that the received signal would not be amplified and the ON state as the received signal would be amplified by the amplifier) (this control signal is provided in response to the DSP determination that IMD is present that the AGC block 315 can compensate for the loss gain when the LNA 305 is bypassed, figure 3, column 7, lines 59-62) , wherein the step of deciding to switch the amplifier to its ON state is exclusively taken during at least one time interval when the receiver is switched to a channel (during initial start-up of the receiver, the received signal passed through the bandpass filter 302 in figure 3 and a channel of 869-894 MHz is selected, column 6, lines 39-50, then a 20 ms interrupt occurs beginning with step 401 and end at step 420 in figure 4 for determining whether to bypass the LNA 305 in figure 3, column 9, lines 5-8).

(2) Regarding claim 3:

Kenney et al. discloses wherein the step of measuring at least one signal quality parameter comprises the step of measuring intermodulation products (the intermodulation distortion IMD or interference to noise ratio (INR) column 9, lines 1-4).

(3) Regarding claim 4:

Kenney et al. discloses wherein the step of measuring at least one signal quality parameter comprises the step of measuring a noise-related signal (the intermodulation distortion IMD or interference to noise ratio (INR) column 9, lines 1-4).

(4) Regarding claim 15:

Kenney et al. discloses a signal quality measuring system (DSP 330 in figure 3) for use in a receiver (the receiver as disclose in figure 3) capable of receiving at least one input signal, designed to generate a signal indicative of intermodulation products

(this control signal is provide in response to the DSP's determination that IMD is present so that the AGC block 315 can compensate for the loss of gain when the LNA 305 is bypassed, column 7, lines 59-63).

7. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Kasperkovitz (US 2004/0053585 A1).

Kasperkovitz discloses a signal quality measuring system for use in a receiver capable of receiving at least one input signal, designed to generate a signal indicative of the status (active/inactive) of an automatic gain control system of the receiver (a wideband level detecting means WD, the wideband RF output signal of the RF input circuit RFC is being detected to provide a wideband RF signal level indicative DC signal, the wideband RF signal level indicative DC signal is being compared with a second set level value SL2, the second AGC loop is active only for values of the wideband RF signal level indicative DC signal exceeding said second set level SL2 and is inactive for smaller values thereof, paragraph 0043)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 2, 8, 13, 14, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenney et al. (US 6,009,129) in view of Hutchison IV et al. (US 5,722,061).

(1) Regarding claim 2:

Kenney et al. discloses all the subject matter as discussed in claim 1 except the method comprises the steps of (a) remeasuring said signal quality parameter; (b) deciding, on the basis of the remeasured parameter, to either maintain the amplifier I its ON state or to switch the amplifier to its OFF state.

However, Hutchison IV et al. discloses a method comprising the steps of (a) remeasuring said signal quality parameter (step 1702 turn on the LNA amplifier and then measure the power of the received signal, column 9, line 65 – column 10, lines 2; the process of the present invention can be used continuously checking the intermodulation products at a low rate, column 9, lines 49-52); (b) deciding, on the basis of the remeasured parameter, to either maintain the amplifier in its ON state or to switch the amplifier to its OFF state (decision step 1704 in figure 17, it is determined whether the receive power is greater than a disable threshold, if the receive power is not greater than the disable threshold, then the process return to block 1702, column 10, lines 1-5).

It is desirable to remeasuring said signal quality parameter and deciding, on the basis of the remeasured parameter, to either maintain the amplifier I its ON state or to switch the amplifier to its OFF state because by constantly monitoring the parameter, it can prevent the receive signal being distorted by turning on the LNA without knowing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to employ the teaching of Hutchison IV et al. in the method of Kenney et al. to prevent the received signal being distorted.

(2) Regarding claim 8:

Kenney et al. discloses all the subject matter as discussed in claim 1 except the method comprises the steps of (a) switching the amplifier to its off state; (b) measuring a value SIP if said at least one signal quality parameter while the amplifier id maintained in its OFF state; (c) comparing the measured value with a predetermined decision level; (d) if the comparison indicates good signal conditions, deciding to keep the amplifier operating in its OFF state.

However, Hutchison IV et al. discloses (a) switching the amplifier to its off state (step 1706 in figure 17, disable LNA, column 10, lines 9-15); (b) measuring a value SIP if said at least one signal quality parameter while the amplifier id maintained in its OFF state (measure the receive power when the LNA is being turn off, column 10, lines 17-18); (c) comparing the measured value with a predetermined decision level (step 1708 in figure 17, is receive power < enable threshold, column 10, lines 18-19); (d) if the comparison indicates good signal conditions, deciding to keep the amplifier operating in its OFF state (step 1710 test if the significant intermod components present, column 10, lines 24-26).

It is desirable to switching the amplifier to its off state; measuring a value SIP if said at least one signal quality parameter while the amplifier id maintained in its OFF state; comparing the measured value with a predetermined decision level; if the comparison indicates good signal conditions, deciding to keep the amplifier operating in

its OFF state because it prevent more intermodulation distortion will be created by turning on the LNA. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Hutchison IV et al. in the method of Kenney et al. to reduce the distortion created by the LNA.

(3) Regarding claim 13:

Kenney et al. discloses a method comprising the step of measuring signal conditions of all available channels (of the N bins, M maximum are identified as having the highest average power, the average power for the remaining (N-M) bins across the entire sample bandwidth is calculated, this value represent the "noise estimate", column 8, lines 33-36); and deciding to switch are taken exclusively during an initializing procedure of the receiver (during initial start-up of the receiver, LNA 305 is set to high gain to facilitate signal location, where it remains to high gain until IMD detection function to executed and provide a signal to indicate the presence of IMD, column 6, lines 46-50).

(4) Regarding claim 14:

Kenney et al. discloses wherein the at least one signal quality parameter comprises signal to noise ratio (the INR is compared to a pre-determined threshold in step 409 in figure 4, column 8, lines 60-62) and a signal strength of each of the available channel (as shown in figure 5, the power of bin is being measured).

(5) Regarding claim 17:

Kenney et al. discloses a receiver (receiver discloses in figure 3) comprising:

an input for receiving a wideband signal potentially comprising multiple channels (antenna 301 in figure 3);

a tuner stage (bandpass filter 308 in figure 3);

a wideband amplifier connected between said input and said tuner (low noise amplifier 305 in figure 3 locate between the antenna and the BPF 308);

a controllable switch bridging said amplifier (switch 303 and 304 in figure 3);

a switch controller is designed to measure at least one signal quality parameter and to generate its switch control signal on the basis of the measured parameter (DSP 330 in figure 3 measure the intermodulation distortion and generate a switch control signal through line 332 to control the open and close of the switch 303 and 304);

Kenney et al. discloses when a channel is selected (initial setup of the receiver) the DSP 330 in figure 3 determine the if the INR exceeds the threshold, the method proceeds to step 411 where the front end gain is set low by sending a command to bypass LNA 305, if, in step 409, the INR is less than the threshold or, in step 408, the received signal is not so low at to be undetectable, the sampling interrupt is ended (step 420), column 8, line 63 – column 9, liens 8).

10. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albicker (US 7,274,918 B1) in view of Tazine et al. (US 5,877,822).

(1) Regarding claim 13:

Albicker disclose the method comprises the step of measuring signal conditions of all available channels (when in the auto-store mode, the entire AM radio band is

tuned through step-by-step, and every AM reception frequency is investigated for its overall reception quality, that is reception quality takes into account the reception situation on its neighbor reception frequencies, when a good channel reception is found, the amplifier 6 will be turned on, column 5, lines 23-29).

Albicker fails to disclose the steps of measuring and deciding to switch are taken exclusively during an initializing procedure of the receiver.

However, Tazine et al. discloses a method where in the initialization procedure (when the button is pressed in figure 1) includes scanning for channels for the entire frequency range (column 2, lines 48-51).

It is desirable to perform the measuring signal condition during initialization because it can save all the channels to memory for further selection. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Tazine et al. in the method of Albicker to make the method more convenient for the users.

(2) Regarding claim 14:

Albicker discloses wherein the at least one signal quality parameter comprises a signal-to-noise ratio and a signal strength of each of the available channels (column 5, lines 23-29 describe the process of detecting the overall reception quality wherein the received power of each channel (Fn) is measured and the received power of the adjacent channel (Fn+1 and Fn-1) are also measure and take into account for considering as noise to the channel Fn, the noise (received power) of the neighbor channels is subtract from the power of channel Fn and compare to a threshold, column

4, lines 19-40); so that the process is signal–noise and compare to the threshold, the equation can be rewrite as the signal/noise-1 and compare to the threshold divided by the noise, this is the same as considering the signal to noise ratio).

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claim 16 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,496,017 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the US patent 6,496,017 B2 discloses "wherein a processor is arranged to calculate said antenna signal strength (X) in accordance with the following steps: establishing whether or not said first automatic gain control stage is

active; if said first automatic gain control stage is active, increasing said predetermined threshold level (TOP) to a first new threshold level such that said first new threshold level is equal to said antenna signal strength (X) and the first automatic gain control stage starts to become inactive, and calculating said antenna signal strength as being equal to said first new threshold level; and if said first automatic gain control stage is inactive, decreasing said predetermined threshold level (TOP) to a second new threshold level such that said second new threshold level is equal to said antenna signal strength (X) and the first automatic gain control stage starts to become active, and calculating said antenna signal strength as being equal to said second new threshold level.", column 10, lines 33-52. This paragraph discloses a signal quality measuring system (the processor arranged to calculate the antenna signal strength) for use in a receiver capable of receiving at least one input signal, designed to generate a signal indicative of the status (active/inactive) of an automatic gain control system of the receiver (establishing whether or not said first automatic gain control stage is active ; if said first automatic gain control stage is active, increasing said predetermined threshold level (TOP) to a first new threshold level such that said first new threshold level is equal to said antenna signal strength (X) and the first automatic gain control stage starts to become inactive, and calculating said antenna signal strength as being equal to said first new threshold level; and if said first automatic gain control stage is inactive, decreasing said predetermined threshold level (TOP) to a second new threshold level such that said second new threshold level is equal to said antenna signal strength (X)

and the first automatic gain control stage starts to become active, and calculating said antenna signal strength as being equal to said second new threshold level).

13. Claim 5 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,496,017 B2 in view of Kenney et al. (US 6,009,129).

Claim 1 of US 6,496,017 B2 discloses a method wherein the step of measuring at least one signal quality parameter comprises determining whether an automatic gain control system of the receiver is active or inactive as discuss in the rejection of claim 16 above except the steps of measuring at least one signal quality parameter; and deciding to switch the amplifier either to its ON state or to its OFF state on the basis of the measured parameter, wherein the step of deciding to switch the amplifier to its ON state is exclusively taken during at least one time interval when the receiver is switched to a channel.

However, Kenney et al. discloses a method comprising the steps of measuring at least one signal quality parameter (intermodulation distortion (IMD), column 6, lines 46-50); and deciding to switch the amplifier either to ON state or to its OFF state on the basis of the measured parameter (the examiner interpret the OFF state as the signal bypass the amplifier so that the received signal would not be amplified and the ON state as the received signal would be amplified by the amplifier) (this control signal is provided in response to the DSP determination that IMD is present that the AGC block 315 can compensate for the loss gain when the LNA 305 is bypassed, figure 3, column

7, lines 59-62) , wherein the step of deciding to switch the amplifier to its ON state is exclusively taken during at least one time interval when the receiver is switched to a channel (during initial start-up of the receiver, the received signal passed through the bandpass filter 302 in figure 3 and a channel of 869-894 MHz is selected, column 6, lines 39-50, then a 20 ms interrupt occurs beginning with step 401 and end at step 420 in figure 4 for determining whether to bypass the LNA 305 in figure 3, column 9, lines 5-8).

It is desirable to the steps of measuring at least one signal quality parameter; and deciding to switch the amplifier either to its ON state or to its OFF state on the basis of the measured parameter, wherein the step of deciding to switch the amplifier to its ON state is exclusively taken during at least one time interval when the receiver is switched to a channel because it can prevent a high intermodulation distortion generate by the LNA 305 in figure 3. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Kenney et al. in the method of US 6,496,017 B2 to reduce the intermodulation distortion in the received signal.

Allowable Subject Matter

14. Claims 6-7, 9-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakai et al. (US 4,654,884) discloses a radio receiver with switching circuit for elimination of intermodulation interference. Lapid (US 6,687,489 B1) discloses an implementing RF power measurement in a broadband communication device. Loke (US 6,311,048 B1) discloses an intelligent control of receiver linearity based on interference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Siu M. Lee whose telephone number is (571) 270-1083. The examiner can normally be reached on Mon-Fri, 7:30-4:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Siu M Lee
Examiner
Art Unit 2611
11/6/2007

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER